## LISTING OF THE CLAIMS

1. (Currently Amended) A method for identifying a single nucleotide polymorphism in a target ~~in an isothermal target amplification reaction~~, said method comprising:

   a) hybridizing a detector primer to the target, wherein the detector primer comprises a diagnostic nucleotide for the single nucleotide polymorphism, said diagnostic nucleotide located ~~about~~ two to four nucleotides 5' of the 3' nucleotide of the detector primer which is complementary to the target sequence;
   b) amplifying the target by hybridization and extension of the detector primer in an isothermal target amplification reaction;
   c) determining an efficiency of detector primer extension is greater, lesser or equal to the efficiency of extension of a detector primer without said diagnostic nucleotide; and
   d) detecting the presence or absence of the single nucleotide polymorphism based on the efficiency of detector primer extension.

2. (Cancelled)

3. (Previously Presented) The method of Claim 1 wherein the single nucleotide polymorphism is identified using multiple detector primers, each comprising a different diagnostic nucleotide.

4. (Previously Presented) The method of Claim 3 wherein two detector primers are used to identify which of two possible single nucleotide polymorphisms is present in the target sequence.

5. (Previously Presented) The method of Claim 3 wherein four detector primers are used to identify the single nucleotide polymorphism.

6. (Original) The method of Claim 3 wherein each of the multiple detector primers has a different 5' tail sequence.

7. (Original) The method of Claim 1 wherein the detector primer further comprises a nucleotide which forms a nondiagnostic mismatch with the target sequence.

8. (Original) The method of Claim 7 wherein the nondiagnostic nucleotide is positioned within fifteen nucleotides of the diagnostic nucleotide in the detector primer.

9. (Original) The method of Claim 8 wherein the nondiagnostic nucleotide is positioned 1-5 nucleotides from the diagnostic nucleotide in the detector primer.

10. (Original) The method of Claim 9 wherein the nondiagnostic nucleotide is adjacent to the diagnostic nucleotide in the detector primer.

11. (Original) The method of Claim 7 wherein the detector primer is about 15-36 nucleotides long.

12. (Original) The method of Claim 11 wherein the detector primer is about 18-24 nucleotides long.

13. (Previously Presented) The method of Claim 1 wherein the amplification reaction is selected from the group consisting of Strand Displacement Amplification (SDA), Self-Sustaining Sequence Replication (3SR), Nucleic Acid Based Amplification (NASBA), and Transcription Mediated Amplification (TMA).

14. (Original) The method of Claim 1 wherein the detector primer is about 12-50 nucleotides long.

15. (Original) The method of Claim 14 wherein the detector primer is about 12-24 nucleotides long.

16. (Original) The method of Claim 15 wherein the detector primer is about 12-19 nucleotides long.

17. (Previously Presented) The method of Claim 1 wherein the presence or absence of the single nucleotide polymorphism is detected by means of a label attached to the detector primer.

18. (Original) The method of Claim 17 wherein the label becomes detectable upon extension of the detector primer or produces a change in signal upon extension of the detector primer.

19. (Previously Presented) The method of Claim 18 wherein the label is a fluorescent donor/quencher dye pair and a decrease in donor dye fluorescence is detected as identifying the presence of the single nucleotide polymorphism.

20. (Cancelled) The method of Claim 18 wherein the label is a fluorescent donor/quencher dye pair and a decrease in donor dye fluorescence is detected as an indication of the presence of the single nucleotide polymorphism.

21. (Original) The method of Claim 1 wherein the efficiency of detector primer extension is determined quantitatively.

22. (Previously Presented) The method of Claim 1 further comprising, prior to amplifying, displacing the hybridized detector primer from the target by extension of an upstream primer, and hybridizing the detection primer to the target.